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DETERMINANTS OF BANKING CAPITAL ADEQUACY AT INFOBANK15 2016-2020

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ABSTRACT

The capital adequacy ratio is an important part of banking financial institutions that can estimate the position of funds held by banks that are available and adequate to assist in the process of their operational activities. The purpose of this study is to determine the determinants of the capital adequacy ratio seen from the effect of profitability as proxied by return on assets (ROA), credit risk as proxied using Non-Performing Loans (NPL), and the size of banking companies listed on INFOBANK15 in 2016-2020. The method used in this research is quantitative with the type of data used is panel data. The population used in this study are banking companies registered at INFOBANK15 2016-2020, totaling 15 with a purposive sampling technique. The analysis technique in this research is panel data regression. Based on the results of the study, it shows that profitability with a return on assets proxy and credit risk with a non-performing loan proxy has an effect on capital adequacy, while firm size has no impact on capital adequacy. However, the three independent variables have not been able to accurately explain and predict capital adequacy.

Keyword: Capital Adequacy Ratio, Credit Risk, Profitability, Size

PENDAHULUAN

The Indonesian economy today cannot be separated from the important role that financial institutions have, and one of the existing financial institutions in the country is the Bank (Pratama et al., 2021). Banks play a role in building the country's economy, not only affecting people's lives, but also involving the flow of funds or capital from banks (Pratama et al., 2021). The importance of the banking sector is based on the assumption that banks are the main channel that functions as a financial liaison between fund owners and those in need, and becomes a forum that functions to facilitate the flow of funds (Hasanah & Manda, 2021). Banking funds are obtained from the main capital and owner's capital, having relatively sufficient capital, can be something useful for banks so that they are able to maintain public trust in a bank (M. K. Dewi & Dewi, 2022). Capital adequacy is an important factor that predicts whether the funds owned by a bank are adequate to carry out its operational processes. Capital adequacy itself is a measure of the capacity of a bank when dealing with a decrease in assets that will result in losses for the bank and capital adequacy is needed to assess the bank's ability to fulfill its obligations in paying debts (Putri & Dana, 2018). According to the reference set by Bank Indonesia (BI) in Bank Indonesia Regulation Number 15/12/PBI/2013, the national banking industry's minimum capital adequacy ratio is 8%. Banks with a high level of capital adequacy can be said to be quite able to finance their operational activities and are able to mitigate all risks of losses that come unexpectedly (Utami & Tasman, 2020). Here is how the picture of capital in two different populations.

Table 1. Average Banking Capital 2016-2019

Popolutaion	2016	2017	2018	2019
INFOBANK15	20.9727	21.7313	22.434	22.7673
Regional Development Bank	21.13227	21.78773	22.25909	21.73045

Source: proceseed data

This study found a phenomenon where the two populations were different in the same type of industry but had different capital conditions in 2016-2019. Changes in capital adequacy can occur due to various internal and external factors. The bank's own internal factors can be reviewed through bank financial ratios, while external factors can be viewed from a macroeconomic perspective. Several studies examining capital adequacy have found various factors that can have an impact on capital adequacy, such as in research (Ramadhani & Mubarokah, 2020) at Bank Muamalat Indonesia, liquidity and profitability have a simultaneous effect. Then in research (Mustopo & Mardiansyah, 2020) a study on Panin Syariah Bank for the period 2011-2015 liquidity and profitability affect capital adequacy. Research (Siagian, 2020) on OJK-registered National Banking in the 2014-2019 period shows that credit distribution and non-performing loans have an effect on capital adequacy. Own capital adequacy can be proxied by CAR (Capital Adequacy Ratio) as used by (Yadnya, 2017) on the level of capital adequacy in rural banks in the province of Bali for the 2015-2016 period. In research (Agustini & Wardana, 2018) at BPR Klungkung Regency for the period 2013-2017. As well as research (Sorongan, 2020) at Regional Development Banks for the 2016-2019 period. Several previous studies have shown that profitability or profitability has an effect on capital adequacy as in research (Aisyah, 2019; Mustopo & Mardiansyah, 2020; Qonitatillah & Rizal, 2021). While the findings in (Rianto & Salim, 2020) show that profitability has no effect on the Capital Adequacy Ratio. Furthermore, the findings in (Rianto & Salim, 2020) show that non-performing loans which are a proxy for credit risk affect capital adequacy. This result is inversely proportional to the results of research (Qonitatillah & Rizal, 2021) which shows that credit risk has no effect on capital adequacy. Furthermore, research (A. R. Dewi & Yadnya, 2018; Oktaviana & Syaichu, 2016) shows that company size has an effect on capital adequacy. Based on previous research, it can be seen that the relationship between profitability, credit risk, and firm size on the Capital Adequacy Ratio (CAR) is still inconclusive, therefore researchers are interested in conducting research with the title **"DETERMINANTS OF BANKING CAPITAL ADEQUACY AT INFOBANK15 2016-2020"**

METODE PENELITIAN

The use of a quantitative approach in this study is useful as research on certain populations or samples from the established hypothesis and the data collection is statistical (Sugiyono, 2016). In this causal research, it has a purpose, namely as evidence obtained from causal linkages, independent variables and dependent variables on certain phenomena. This is in line with this study which aims to identify the effect of profitability, credit risk, and firm size with the level of capital adequacy at Banks Registered at Infobank15 for the 2016-2020 period.

Secondary data was chosen as the type of data in this study by obtaining it from the

object of research indirectly. By using the data obtained indirectly related to the variables of profitability, credit risk, and company size with the level of capital adequacy in the form of annual financial reports at Banks registered at Infobank15, namely the income statement and balance sheet, where the data is obtained from the official website of Banking Statistics Data (www. .ojk.go.id), and obtained from the respective bank's website.

The population in this study were all registered at Infobank15, namely 15 banks. The research sample used purposive sampling technique by determining several sample criteria and produced 15 banks as samples. The sample criteria are banks that report annual financial statements for the 2016-2020 period.

The data analysis technique in this study used several tests, namely: Chow test, Hausman test, and Langerange multiple test with the help of Eviews version 9. Measurement of variables in this study used Return on assets, non-performing, and company size and capital adequacy ratio. The basic model of multiple linear regression from this research can be formulated as follows:

$$Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

Note:
Y : Capital Adequacy Ratio
α : Kontsanta
β1-3 : regression coefficient
X1 : Return on asset
X2 : Non Performing Loan
X3 : Size
ε : Error term

HASIL DAN PEMBAHASAN

Descriptive Statistical Analysis

Table 2. Descriptive Statistical Analysis

	CAR	ROA	NPL	SIZE
Mean	22.55053	2.345600	2.164267	16.50667
Median	21.90000	1.890000	1.930000	16.71000
Maximum	49.44000	13.58000	4.770000	21.14000
Minimum	0.130000	0.130000	0.000000	11.16000
Std. Dev.	8.286200	2.209124	0.910300	2.915502
Observations	75	75	75	75

Source: Eviews version 9 output (data has been processed)

Panel Data Analysis

Selection of Analysis Panel Data Regression Estimation Method Simultaneously selecting the common effect model or fixed effect model

Table 3. Chow Test

Redundant Fixed Effects Tests
Equation: FEM
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	13.533912	(14,57)	0.0000
Cross-section Chi-square	109.815626	14	0.0000

Source: Eviews version 9 output (data has been processed)

The results of the Chow test in Table 3 above, show the probability (p-value) of the cross section F of 0.0000 <0.05 with a significance level of 5%. Based on these data, it can be concluded that the fixed effect model is better than the common effect model. After the chow test is completed, it is continued with the Hausman test.

Table 4. Hausman Test

Correlated Random Effects - Hausman Test
Equation: REM
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.9812444723	3	0.11252629

Source: Eviews version 9 output (data has been processed)

The Hausman test results in Table 4 above show a random cross-section p-value of 0.11252629 > 0.05 with a significance level of 5%. Based on these data, it can be concluded that the Random Effect Model is better than the fixed effect model. After the Hausman test, it is continued with the Langrange Multiplier Test.

Table 5. Langrange Multiplier

	Test Hypothesis Cross-section	Time	Both
Breusch-Pagan	54.25539 (0.0000)	0.023577 (0.8780)	54.27897 (0.0000)

Source: Eviews version 9 output (data has been processed)

The results of the Langrange multiplier test in Table 5 above, show a p-value cross-

section of 0.0000 <0.05 with a significance level of 5%. Based on these data, it can be concluded that the panel data regression model used is a random effect model which is better than the common effect model.

Panel data regression equation

Based on the results of testing the three models that have been carried out (Chow Test, Hausman Test and Lagrange Multiplier Test), the Random Effect model is the right model for this research.

Table 6. Random Effect Model Significance Test Results

Dependent Variable: CAR
Method: Panel EGLS (Cross-section random effects)
Sample: 2016 2020
Periods included: 5
Cross-sections included: 15
Total panel (balanced) observations: 75
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	24.24418	4.781193	5.070740	0.0000
ROA	0.760463	0.339941	2.237041	0.0284
NPL	-1.805464	0.824885	-2.188748	0.0319
SIZE	0.026057	0.248095	0.105028	0.9166
R-squared	0.130204	Mean dependent var		5.968749
Adjusted R-squared	0.093452	S.D. dependent var		4.090065
S.E. of regression	3.894265	Sum squared resid		1076.736
F-statistic	3.542787	Durbin-Watson stat		1.012291
Prob(F-statistic)	0.018799			

Source: Eviews version 9 output (data has been processed)

Based on Table 6, the authors formulate an equation of the panel data regression model that explains the effect of Return on assets, company size and non-performing loans on the capital adequacy ratio in banks registered at Infobank15 2016-2020, namely:

$Y= 24.24418+ 0.760463X_1 -1.805464X_2 + 0.026057X_3 + \varepsilon$

Note:
Y: *Capital Adequacy Ratio*
X_1: *Return on Asset*

X_2: *Non Performing Loan*
X_3: Ukuran Perusahaan
ε : *Error term*

The regression equation can be interpreted as follows first return on assets (ROA), Non-Performing Loans (NPL) and company size is zero, then the Capital Adequacy Ratio (CAR) at Bank Infobank15 is 24,24418 . Second The ROA regression coefficient of 0.760463 indicates that every time there is an increase in ROA of one unit with the assumption that other variables are zero, the CAR will increase by 0.760463 . This shows that when ROA increases, CAR will increase. The NPL regression coefficient of -1.805464 indicates that for every increase in NPL by one unit assuming other variables are zero, the CAR will decrease by -1.805464 . This shows that when the NPL decreases, the CAR increases. The regression coefficient for firm size is 0.026057, indicating that for every one unit increase in firm size assuming other variables are zero, the CAR will increase by 0.026057 . This shows that when the size of the company decreases, the CAR will decrease.

Furthermore, the results of the t statistical test show that basically the t statistical test shows how the influence of the independent variables individually explains the dependent variable. This study uses partial testing to determine the effect of each independent variable, namely Return on assets, non-performing loans, and firm size on the Capital Adequacy Ratio (CAR). So from the results of Table 6 it can be concluded that The value of the probability return on assets is 0.0284. This value indicates that 0.0284 <0.05 with a regression coefficient of 24.24418, it can be concluded that the profitability variable that is proxied by return on assets partially has a significant positive effect on the capital adequacy ratio. Then hypothesis 1 is accepted.

The effect of return on assets on the capital adequacy ratio is because the return on assets obtained by Infobank banking15 shows good banking performance, the better and the greater the level of profit obtained. The greater the profit generated by a bank will be able to increase the bank's capital, because profit is one of the components in the core capital that composes the bank's capital structure. Because the higher the return on assets, the higher the amount of net profit generated from each rupiah of funds embedded in total assets. Conversely, the lower the return on assets means the lower the amount of net profit generated from each rupiah of funds embedded in total assets will increase capital adequacy (M. K. Dewi & Dewi, 2022). These findings are in line with the findings (Utami & Tasman, 2020) where the proxied profitability using return on assets has a significant positive effect on capital adequacy with a level of sig.000. This result is not in line with research (Hasanah & Manda, 2021; Qonitatillah & Rizal, 2021; Ramadhani & Mubarokah, 2020) which shows that the profitability variable has no effect on capital adequacy.

The probability value of non-performing loan is 0.0319 < 0.05. This value indicates that non-performing loans as a proxy for credit risk affect the capital adequacy ratio with a coefficient value of -1.805464, which means that non-performing loans have a significant negative effect. Then hypothesis 2 is accepted. The influence of credit risk on capital adequacy is because when non-performing loans are higher than the increase in total credit obtained by Infobank banking15, it results in a higher increase in costs that must be reserved, lowers interest income, so that it will reduce profits and reduce bank capital (Utami & Tasman, 2020). The results of this study are in line with what has been found by (Rianto & Salim, 2020; Utami & Tasman, 2020) which shows that non-

performing loans can affect capital adequacy. In contrast to the results shown by (Qonitatillah & Rizal, 2021) non-performing loans do not affect the capital adequacy ratio.

The probability value of company size is 0.9166 > 0.05. This value indicates that the size of the company has no effect on capital adequacy. Then hypothesis 3 is rejected. There is no effect of company size on capital adequacy, it can be indicated that the total assets owned by infobank banking15 even though they are placed in productive assets, where earning assets carry a large risk, and increase the RWA, do not affect the capital adequacy ratio. This result is not in line with the results of the study (A. R. Dewi & Yadnya, 2018).

Furthermore, the results of the coefficient of determination test show that the value of the coefficient of determination produced by Adjusted R-squared is 0.093452. The results obtained indicate that the independent variable is able to contribute in influencing the dependent variable by 9%, while another 91% is influenced by other variables not examined.

SIMPULAN / SIMPULAN DAN SARAN

Based on the results of statistical analysis it can be concluded that:

1. Profitability proxied by return on assets has an effect on capital adequacy
2. Credit risk proxied by non-performing loans affects capital adequacy
3. Company size cannot affect capital adequacy

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